REMARKS

Status

[1] As of the Office Action of 6 Oct 2005, there were 14 claims pending in the application, original claim 15 having been withdrawn in a provisional election. Applicants affirm the election of claims 1-14 for prosecution in this application and reserve the right to file a continuation for claim 15 during its pendency.

[2] Owing to the claim amendments made herein, there are currently 13 claims pending in this application. Original claim 6 has been cancelled. Neither claim amendments nor election implicate a change in inventive entity.

Rejections

35 USC 102(b)

[3] Claims 1-5, 8 and 9 were rejected under this provision as anticipated by U.S. Pat. No. 5,237,008 to Kosinski ["Kosinski"]. Paragraph 7 of the Office Action states that Kosinski teaches incorporating linear low-density polyethylene ["LLDP"] polyoxymethylene composition. Claims 1,5, 8, 9 and 11 were also rejected under this provision as anticipated by Jap. App. Pub. No. 2002192663A ["Polyplastics"]. Paragraph 8 of the Office Action states that Polyplastics teaches an intermediate layer with a layer of polyolefin and a layer of polyoxymethylene on either side of it, with each layer having a specific ratio of polyolefin to the polyoxymethylene.

[4] As amended, the present claims recites a non-acetal thermoplastic polymer selected from a group that does not include linear low-density polyethylene or the layers disclosed in Polyplastics. Therefore, because neither Kosinski nor Polyplastics discloses all claim elements as recited, Applicants respectfully request the withdrawal of these rejections.

35 USC 103(a)

Kosinski-Shofner

[5] Paragraph 10 of the Office Action rejected claim 13 under this provision as obvious over Kosinski in view of US Pat. No. 3,813,212 to Shofner et al. ["Shofner"]. In a telephone conversation with Applicants' representative, the Examiner confirmed that this rejection should have identified claim 14, instead of claim 13 and the following traverse concerns claim 14.

[6] As stated above, the Office Action relied on Kosinski for incorporating a LLDP into a polyoxymethylene composition. The Office Action ¶10 alleges that Shofner teaches to flame treat a thermoplastic polymer prior to lamination in order to improve adhesion. For the reasons discussed above, Kosinski does not disclose all elements of the composition as recited in the claims nor does Shofner. As a combination, Kosinski-Shofner cannot suggest or motivate a skilled artisan to combine the references to arrive at the modification that is the recited invention. The combination cannot support a *prima facie* case of obviousness and Applicants respectfully request its withdrawal.

Nakamura-Kosinski

[7] Claim 1, 5-7 and 9 were rejected under this provision as obvious over Jap. Pat. No. 2002309064 to Nagamura ["Mura"] in view of Kosinski.

[8] MPEP 2143.03 and 2143.01 states that a *prima facie* case of obviousness requires the combination of cited references meets each of the following:

(a) the combination discloses all claim elements **as recited;** AND

(b) the combination suggests from within itself the modification of the present invention; AND

(c) the combination has a reasonable chance of success.

If **any** of these is **not met, no** *prima facie* case of obviousness is established.

[9] The Office Action in ¶11 acknowledges that Mura does not teach that a composition comprising 100bpw polyoxymethylene and 0-100 pbw of a polycarbonate resin may be laminated to other layers. The Office Action asserts obviousness because "Kosinski teaches it is known in the art to laminate polyoxymethylene layers to other layers". In essence then, the Office Action hinges the rejection on requirement (b): that the combination suggests or motivates for the modification of the present invention. This response therefore concentrates on the non-establishment of the (b) requirement and in the interest of efficiency does not address requirements (a) and (c) above since only one of the above MPEP requirements must be shown not to hold for the rejection to be infirm. By addressing only requirement (b), Applicants are not acquiescing that requirements (a) and (c) have been met by this rejection.

[10] Regarding requirement (b), the MPEP and the courts emphasize repeatedly that, "obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching suggestion or incentive supporting the combination" *In re Geiger*, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987). This is determined from an analysis of what an ordinarily skilled artisan, guided only by the art references, would have gleaned from the references. Such an analysis removes impermissible hindsight, which occurs when the

rejection defines the technical problem of an invention backwardly, that is, using the technical solution recited in the claims and then making an "enlightened" selection of prior art references based on the invention solution.

[11] A proper analysis instead starts with a straightforward assertion of the technical problems and solutions stated in the art references inasmuch as these are the affirmative teachings of the art and then compares these with the technical problems and solutions of the modification that is the present invention. Such an analysis also considers those teachings in the art references that lead away from the claimed modification.

[12] Mura is an English abstract of a Japanese patent. It discloses that its technical solution is to provide a composition comprising a polyoxymethylene resin, a styene resin, a polycarbonate resin and a polyolefin resin having excellent dimensional stability, mechanical properties such as impact resistance and thermal stability and giving a molded article having excellent surface state. Kosinski is a U.S. patent having a technical solution to provide polyoxymethylene compositions "having increased elongation at break" (Kosinski, col. 1:37-38 and 43-46).

[13] The technical solution of the present invention is to provide a substrate comprising polyoxymethylene and at least one non-acetal thermoplastic polymer **in order to promote adhesion between the substrate and a layer adhered to it.** To the point, the specification discusses that articles previously made from polyoxymethylene exhibit high stiffness, strength and solvent resistance, but because of their highly crystalline surface, they also have "low levels of adhesion:. This makes it "difficult if not impossible to readily paint, glue, or print on such surfaces, overmold such articles with thermoplastic polymers or adhere some other type of layer to the surface of the substrate" (spec., page 1:27-32). Also, "polyoxymethylene based substrates have low levels of adhesion at their surface", which makes it difficult to fashion layered articles for commercial purposes (spec., page 2:32-35). Moreover, the examples and comparative examples (see Tables 1, 3, and 4) demonstrate that substrates comprising polyoxymethylene and at least one non-acetal thermoplastic polymer have significantly better adhesion to other materials than substrates comprising polyoxymethylene without at least one non-acetal thermoplastic polymer.

[14] Neither Mura nor Kosinski hints, suggests or contains even a throw-away statement that remotely points to the recited and disclosed technical solution of the present invention, e a polyoxymethylene blend substrate that **promotes adhesion between the substrate and at least one layer adhered to it**, thereby allowing application of a coating or paint, etc. (spec., pg. 1:13-15; claim 1). The motivation for putting together Kosinski with Mura could **not**

have come from within the Kosinski-Mura combination but could only have arisen from a backwards application of the technical solution recited in the claims. In effect, Kosinski was glommed onto Mura to create a combination solely because Kosinksi supplies an art reference that discloses laminating polyoxymethylene layers to other layers. Koskinski cannot and does not teach anything about an article that has enhanced **adhesion between the polyoxymethylene substrate and a layer adhered to it, as recited in the claims.**

[15] Applicant respectfully submits that the rejection is improper and asks for its withdrawal.

Nakagawa-Nakamura

[16] Claims 1, 5-7 and 9-12 (13) were rejected under this provision as obvious over Jap. Pat. No. 02027615 ["Gawa"] in view of Mura. In the telephone conversation with the Examiner, Applicants' representative confirmed that this rejection intended to include claim 13 and this response therefore covers claim 13.

[17] The Office Action asserts that even though Gawa does not teach that the polyoxymethylene layer should comprise the claimed composition, Gawa does teach a laminate of 2 insulating layers, the first of which comprises conductors and polyoxymethylene and the second layer comprises polyoxymethylene. Mura is asserted to teach a composition comprising 100pbw polyoxymethylene and 0-100pbw of a polycarbonate resin. The Office Action asserts that the combination would therefore motivate for the substitution of the Mura resin for the polyoxymethylene taught in Gawa and that such motivation "would have been to improve the impact resistance, dimensional stability, and mechanical properties of said laminate.

[18] As discussed above, the technical solution of the present invention is to provide a laminated substrate comprising polyoxymethylene and at least one non-acetal thermoplastic polymer to promote adhesion between the layers. **Nothing** in either Gawa or Mura individually or in combination relates to or **teaches** about **improved adhesion** of polyoxymethylene substrates. Moreover, the technical solution asserted by the Examiner has nothing to do with the recited and disclosed technical solution. Therefore, for the same legal reasoning as presented in the Mura-Kosinski discussion, this combination, because it has nothing to do with the recited and disclosed technical solution, cannot suggest the modification of the present invention and cannot establish a *prima facie* case of obviousness. The Applicants respectfully request the withdrawal of this rejection.

In view of the foregoing, allowance of the above-referenced application is respectfully requested.

Respectfully submitted,

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